

AMENDMENTS TO THE CLAIMS

12. (Original) An SDT junction of a memory cell for an MRAM device, the junction comprising:

a bottom ferromagnetic layer, the bottom ferromagnetic layer having flattened peaks;
an insulating tunnel barrier atop the bottom ferromagnetic layer; and
a top ferromagnetic layer atop the insulating tunnel barrier.

13. (Original) The junction of claim 12, wherein angle from the top of a grain to an intersection with an adjacent grain is between about three and six degrees.

14. (Original) The junction of claim 12, wherein the flattened peaks have a valley-to-peak height difference of no more than about one nanometer.

15. (Original) The junction of claim 12, wherein the junction has a resistance of less than about $10 \text{ K}\Omega\text{-}\mu\text{m}^2$.

16. (Currently amended) The junction of claim 12, wherein the top and bottom layers are AF coupled; wherein the flattened peaks are flattened to tune the AF coupling to a desired level.

17. (Previously presented) An MRAM device comprising:
an array of memory cells, each memory cell including an SDT junction, each SDT junction including a bottom ferromagnetic layer, each bottom ferromagnetic layer having an upper surface, each upper surface having a valley-to-peak height variation of no more than about one nanometer;

a plurality of word lines extending along memory cell rows of the array; and
a plurality of bit lines extending along memory cell columns of the array.

18. (Original) The device of claim 17, wherein resistance variation of the junctions across the entire array is no more than about 4%.

19. (Original) The device of claim 17, wherein angle from the top of a grain to an intersection with an adjacent grain is between and three and six degrees.

20. (Original) The device of claim 17, wherein the junctions have a resistance of less than about $10 \text{ K}\Omega\text{-}\mu\text{m}^2$.

21. (Previously presented) An SDT junction comprising:
a bottom ferromagnetic layer having physically altered peaks;
an insulating tunnel barrier atop the bottom ferromagnetic layer; and
a top ferromagnetic layer atop the insulating tunnel barrier.

22. (Currently amended) The [device] junction of claim 21, wherein the physically altered peaks are flattened peaks.